

REMARKS

Claims 1-24 and 26-31 are pending. All stand rejected. Claims 16 and 27 are amended. The applicant requests further examination and consideration in view of the amendments above and remarks set forth below.

Claim 16 is amended to be consistent with an amendment previously made to claim 15 from which claim 16 depends. Claim 27 is amended to be consistent with an amendment previously made to claim 26 from which claim 27 depends.

Rejections under 35 U.S.C. § 102:

Claims 1-24 and 26-31 are rejected as being anticipated by U.S. Patent No. 6,487,562 to Mason, Jr. et al. (hereinafter "Mason"). Regarding claim 1, the office action mailed September 20, 2005, states:

[T]he *Mason* reference discloses, *A method of assigning resources for a computer system design comprising: (Col. 1 line 66, "The present invention provides a system and method for dynamically modifying parameters in a data storage system.") receiving desired levels of performance parameters for a computer system design from a user via a user interface to a computer system, (Figure 2 Item 40 and Col. 2 lines 21-31), the design including assignments of system resources to applications; (Col. 5, line 33 "A User Interface (UI) 40 application which allows a user to modify the QOS (Quality of Service) for the system 10." The Examiner notes that assigning a Quality of Service requirement for disk array inherently means that some form of "Application" like streaming video is being contemplated by the teachings of the *Mason* reference), modifying the design in response to said desired levels including modifying the assignments of the system resources; (Col 2 lines 50-57, "the present invention include the ability to make changes dynamically to the data storage system while in use."), predicting level of performance parameters for the modified design; and displaying for the user an indication of the predicted levels of performance via the user interface, (Col. 2 lines 66-67 and Col. 3 lines 1-2 "Users can easily manipulate the system settings using the GUI, including a with features such as bar graphs and scales showing real time system settings and performance"). Please also note the passage in Col. 5 lines 32-64.*

Emphasis in original.

The Applicants respectfully traverse the rejection. Mason teaches a system and method for dynamically modifying parameters in a data storage system. Mason at col. 1, lines 66-67. Mason teaches that control is allowed over "certain provided

services on a logical volume basis.” Mason at col. 2, lines 5-7. The services fall into three categories: data replication/recreation through a copy mechanism, performance management through control of caching services, and data integrity checks. Mason at col. 2, lines 7-11 and col. 6, lines 6-12. A QOS data structure is associated with each logical volume. Mason at col. 6, lines 33-39. The QOS data structure stores priority levels for the copy services and the scrub services (i.e. data integrity checks) and a cache services selection bitmap. Table 1 of Mason at col. 6, lines 40-60. The cache services selection bitmap controls cache policies such as prefetch and LRU algorithms. Table 2 of Mason at col. 9, lines 1-24. When a parameter in the QOS data structure is changed, a storage device controller 19 reconfigures the QOS for the logical volume. Mason at col. 7, lines 3-6. If the system administrator attempts to set any parameters that are not valid, for example, parameters that are contradictory or that create a tautology, an error is signaled. Mason at col. 9, lines 43-47.

Claim 1 recites a method of assigning resources for a computer system design comprising: receiving desired levels of performance parameters for a computer system design from a user via a user interface to a computer system, the design including assignments of system resources to applications; modifying the design in response to said desired levels including modifying the assignments of the system resources; predicting levels of performance parameters for the modified design; and displaying for the user an indication of the predicted levels of performance parameters for the modified design via the user interface.

Claim 1 is allowable over Mason at least because Mason does not suggest predicting levels of performance parameters. Clearly, the predicting step of claim 1 is separate and in addition to the receiving step; otherwise, it would not be set out in claim 1 as a separate step. However, in addressing these elements of claim 1, the office action cites different passages of Mason that discuss the same thing, namely the graphical user interface of Mason that allows a user to change system settings. While the user interface of Mason shows the user-selected performance parameters, this is not the same as predicting the results of a change. For example, Mason does not predict the effect that changing a parameter would have on another parameter. Because Mason does not teach or suggest all of its limitations, claim 1 is allowable. Claims 2-9 are allowable at least because they depend from an allowable base claim 1.

In the office action, claims 10 and 23 are rejected using claim 1 “as an example” without further discussion of the actual limitations of claims 10 and 23. However, claims 10 and 23 are not the same as claim 1. For example, claim 10 recites predicting levels of performance parameters for the design, comparing the predicted levels of performance parameters to the desired levels of performance parameters and modifying the design including modifying the assignments of the system resources when the predicted levels are lower than the desired levels. Mason does not teach comparing predicted levels of performance parameters to desired levels and modifying assignments of the system resources based on the comparison. For at least this reason, claim 10 is allowable over Mason. Claims 11-22 are also allowable at least because they are dependent from an allowable base claim 10.

Similarly to claim 10, claim 23 recites a program loop in which performance parameter levels are predicted for the design, the predicted performance parameters are compared to the desired levels of performance parameters and the design is modified, including modifying assignments of system resources to applications, in response to the comparison. However, Mason does not teach comparing predicted levels of performance parameters to desired levels and modifying assignments of system resources based on the comparison. For at least this reason, claim 23 is allowable over Mason. Claims 24 and 26-31 are allowable at least because they are dependent from an allowable base claim 23.

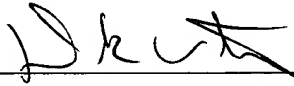
Further, dependent claims recite features not found in Mason. For example, claims 4, 5, 15, 16, 26 and 27 all require use of at least one utility function representing utility as a function of one or more of the performance parameters. Thus, these claims recite the use of a utility function and also define a “utility function” as representing utility as a function of one or more performance parameters. In contrast, Mason does not teach such a feature. In rejecting these claims, the office action states that Mason at col. 6, lines 6-12, teaches “utilities to monitor system and memory resources.” This confuses monitoring “utilities” with “utility functions.” It can be seen that “utilities” as used in the office action are not the same as “utility function” used in the claims by examining the language of claims 4, 15 and 26 in which the term “utility function” is defined. It is important to note that Mason does not use the term “utilities” at col. 6, lines 6-12 or anywhere else. This is another reason why claims 4, 5, 15, 16, 26 and 27 are allowable.

Conclusion:

In view of the above, the applicants submit that all of the pending claims are now allowable. Allowance at an early date would be greatly appreciated. Should any outstanding issues remain, the examiner is encouraged to contact the undersigned at (408) 293-9000 so that any such issues can be expeditiously resolved.

Respectfully Submitted,

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